

**ATTACHMENT - REMARKS**  
**Remarks**

In the following remarks, the matters raised in the Office Action will be considered in the same order as raised.

**Claim Rejections – 35 USC 103**Claims 8-9 and 12

Claims 8-9 and 12 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (AAPA) in view of Brown et al. (U.S. Patent No. 7,088,972) (hereinafter "Brown"). This rejection is respectfully traversed, although independent claim 8 has been amended to further clarify the distinctions between the invention and the prior art.

Claim 8, as amended, recites an improvement to a transmitter apparatus for sending a data transmission over power lines of an electrical power network, comprising,

wherein the transmitter apparatus is divided and separated into at least a first part and a second part connected by a signal cable, said first part including at least the signal shaping and adjustment devices for generating the data transmission signal, and said second part including at least the signal amplifier, a connecting unit for coupling the data transmission signal to the electrical power network, and the connecting cable connecting said second part at least near to phase and zero rails or to a wall outlet of the electrical power network;

wherein the first part steers operation of the second part over the signal cable; and

wherein the length of the connecting cable is under 5 m.

Advantageously, the length of the signal cable can be tens and even hundreds of meters and has no impact on the size of the “rail signal”  $U_{LOAD}$ , which is to be transmitted to the electric net. (See: paragraph [0015] of publication of instant application, U.S. Patent Application Publication No. US 2006/0208567 A1).

It is conceded in the Office Action that, “AAPA does not teach the transmitter divided into a first and second part.” However, It is alleged in the Office Action that, “Brown teaches the use of a transmitter (item 10) divided or distributed into at least a first (item 14) and second parts (item 16). Brown further teaches said second part (16) including at least the signal amplifier (48 or 50) and a connecting unit (connection to DC power at item 18, see col. 8 lines 54-64) for connection to the electrical network (DC power supply network) and the connecting cable connecting said second part at least near to phase and zero rails (rails associated with supply of DC supply) outlet (item 22) of the electrical network; and wherein the length of the connecting cable is under 5 m (see for example end to end distribution being less than 5m and 1 m, col. 3 lines 45-55).” This contention is respectfully traversed, particularly with respect to the “connecting unit” and the “connecting cable.”

It is noted that AAPA, in Fig. 1 and the related description, shows functions of the first part and the second part in the same apparatus enclosure, and describes the related impact being attenuation of the data transmission signal. It is submitted that Brown adds nothing that addresses the attenuation problem of AAPA.

Initially, it is noted that Brown concerns “an adaptive data communication microwave transmitter having a distributable architecture of modular components, ... to provide substantial improvement in flexibility of use ...” (col. 1, lines 16-24). The

distributed data transmitter of Brown is directed at “inflexible characteristics” (i.e., data throughputs, data rates, deviations, spectrums, analog modulations, power capacity, etc.) and physical size considerations (e.g., in a flight vehicle), of prior art microwave transmitters. Brown does not relate in any way to Power Line Communication (PLC) because the power considerations described therein relate only to powering the transmitter and not using the power lines as actual communication connections.

A reference is considered analogous, and, therefore, available for use in an obviousness rejection if it is either (1) within the field of the inventor’s endeavor, or (2) reasonably pertinent to the particular problem with which the inventor was involved. In re Deminski, 796 F.2d 436, 442 (Fed. Cir. 1986).

It is noted that, (1) Brown does not relate in any way to Power Line Communication, and (2) Brown is not reasonably pertinent to attenuation of a data transmission signal in a Power Line Communication system. Thus, it is respectfully submitted that Brown is not an analogous reference for use in rejecting claim 8.

However, even if Brown were a proper reference, it is respectfully submitted that the portions of Brown cited as teaching a connecting unit and a connecting cable merely disclose a power converter 18 adapted to receive DC power at a DC power input 22 and to provide the DC power to the modulator 14 and the amplifier 16. It is respectfully submitted that, reading the amplifier 16 as the “second part,” the power converter 18 and DC power input 22 are external to the amplifier 16. Brown does not contain a teaching or a suggestion of the amplifier 16 (read as the “second part”) including a connecting unit for connection to an electrical network. Further, with respect to the connecting cable, column 3, lines 45-55 makes no mention of a length of a connecting

cable being under 5m. Thus, it is respectfully submitted, without even considering the propriety of the combination, that the combination of AAPA and Brown is likewise deficient.

Still further, considering independent claim 8 as amended, it is respectfully submitted that Brown additionally fails to disclose: "a second part including a connecting unit for coupling a data transmission signal to an electrical power network, and a connecting cable connecting the second part at least near to phase and zero rails or to a wall outlet of an electrical power network, wherein a first part steers operation of the second part over a signal cable, and wherein the length of the connecting cable is under 5 m," as recited in amended independent claim 8.

Claims 9 and 12 depend from amended independent claim 8, and are allowable for at least the reasons provided in support of the allowability of amended independent claim 8.

Accordingly, withdrawal of the rejection of claims 8-9 and 12 is respectfully requested.

#### Claim 13

Claim 13 has been rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Brown and further in view of Carson et al. (U.S. Patent No. 7,007,305) (hereinafter "Carson"). This rejection is also respectfully traversed.

Claim 13 depends from amended independent claim 8, and is allowable over the combination of AAPA and Brown for the reasons discussed above with respect to claim 8.

Carson is cited as teaching "the use of a PLC system and transmitter (50 and 60) which can be connected to 3 phase rails (col. 6, lines 10-20) at another connection point of a network cable.

Carson provides "a repeater amplifier circuit for boosting weak control signals on a PLC network, with noise discrimination and signal firewall protection" (col. 1, lines 9-12). The repeater amplifier circuit of Carson only repeats with greater voltage amplitude received, weak PLC signals being transmitted to an electric network. It is respectfully submitted that Carson does not add anything that would remedy the aforementioned deficiencies in the combination of AAPA and Brown. Accordingly, favorable reconsideration and withdrawal of the rejection of claim 13 are respectfully requested.

## Conclusion

In light of the Amendments and Remarks, Applicants respectfully request early and favorable action with regard to the present application, and a Notice of Allowance for all pending claims is earnestly solicited.

Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and telephone number indicated below.

Respectfully submitted,

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/jeffrey a. haeberlin, reg. no. 40,630/

By: Jeffrey A. Haeberlin

Registration No.: 40,630

**STITES & HARBISON PLLC** ♦ 1199 North Fairfax St. ♦ Suite 900 ♦ Alexandria, VA 22314  
TEL: 703-739-4900 ♦ FAX: 703-739-9577 ♦ CUSTOMER NO. 000881